### **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-010535 Address: 333 Burma Road **Date Inspected:** 27-Nov-2009

City: Oakland, CA 94607

OSM Arrival Time: 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** See Below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component:** Tower

**Summary of Items Observed:** CWI Inspector: Mr. Du Zhiqun

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Tower Bay 10

This QA Inspector observed Ms. Pu Xuezhen, stencil 052075 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to add weld material to extend the length of north tower first lifting bottom plate bearing stiffeners as detailed on critical weld repair TCWR0472-R0. This QA Inspector observed a welding current of approximately 310 amps and 2308 volts. This QA Inspector observed ZPMC QC Inspector Mr. Yuan Hui Gang is monitoring the maximum interpass temperature and additional stiffener welds are not being made until the base metal adjacent to the weld is allowed to cool to a temperature of less than 260 degrees Celsius. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Ms. Dong Yuqin, stencil 053116 is using welding WPS-B-T-4332-TC-P5-F to make weld NSTL4-3K/L-082 between north tower lift 4 elevation 143 meters upper diaphragm and a shear plate. This QA Inspector observed a welding current of approximately 225 amps and 24.0 volts and that Ms. Dong Yuqin appears to be certified to make this weld. Items observed on this date appeared to

## WELDING INSPECTION REPORT

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generally comply with applicable contract documents.

This QA Inspector observed Ms. Guo Liang, stencil 057247 using flux cored welding process to tack weld temporary gusset plates to the bottom end of north tower lift 1 exterior stiffener plates. These portions of the exterior stiffener plates where the welds are being installed are to be removed at a later time. QA Inspector observed ZPMC personnel using a torch to preheat the base materials prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Zhen, stencil 040280 is using shielded metal welding process to weld temporary lifting eyes to the upper exterior skin plates on north tower lift 1. This QA Inspector observed a second person is using a torch to preheat the base material where of these welds are to be made. Items observed on this date appeared to generally comply with applicable contract documents.

#### **Summary of Conversations:**

See Above.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer